### STIC Biotechnology Systems Branch

# RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number:	10/573,130A
Source:	1F1.10.
Date Processed by STIC:	8/29/06
	7 77

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.
PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-0221

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE <u>CHECKER</u> <u>VERSION 4.4.0 PROGRAM</u>, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

http://www.uspto.gov/web/offices/pac/checker/chkrnote.htm

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail. Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

- 1. EFS-Bio (<a href="http://www.uspto.gov/ebc/efs/downloads/documents.htm">http://www.uspto.gov/ebc/efs/downloads/documents.htm</a>, EFS Submission User Manual ePAVE)
- 2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
- Hand Carry, Federal Express, United Parcel Service, or other delivery service (EFFECTIVE 01/14/05):
   U.S. Patent and Trademark Office, Mail Stop Sequence, Customer Window, Randolph Building, 401 Dulany Street,
   Alexandria, VA 22314

Revised 01/10/06



**IFWO** 

RAW SEQUENCE LISTING DATE: 08/29/2006
PATENT APPLICATION: US/10/573,130A TIME: 08:46:39

Input Set : A:\Substitute Sequence List-13111-00035-US.txt

```
3 <110> APPLICANT: Sturmer, Rainer
       Kesseler, Maria
5
        Hauer, Bernhard
 6
        Friedrich, Thomas
        Breuer, Michael
9 <120> TITLE OF INVENTION: Methods for the production of
       3-methylamino-1-(thiene-2-yl)-propane-1-ol
12 <130> FILE REFERENCE: 13111-00035-US
14 <140> CURRENT APPLICATION NUMBER: US/10/573,130A
                                                              Does Not Comply
15 <141> CURRENT FILING DATE: 2006-03-23
                                                              Corrected Diskette Needed
17 <150> PRIOR APPLICATION NUMBER: PCT/EP2004/010939
18 <151> PRIOR FILING DATE: 2004-09-30
20 <150> PRIOR APPLICATION NUMBER: DE 103 45 772.0
                                                          ser pp 6,8
21 <151> PRIOR FILING DATE: 2003-10-01
23 <160> NUMBER OF SEQ ID NOS: 44
25 <170> SOFTWARE: PatentIn version 3.3
28 <210> SEQ ID NO: 1
30 <211> LENGTH: 47
32 <212> TYPE: PRT
34 <213> ORGANISM: Lactobacillus brevis
37 <400> SEOUENCE: 1
39 Met Ser Asn Arg Leu Asp Gly Lys Val Ala Ile Val Thr Gly Gly Thr
                                       10
43 Leu Gly Ile Gly Leu Ala Ile Ala Thr Lys Phe Val Glu Glu Gly Ala
              20
47 Lys Val Met Ile Thr Gly Arg His Ser Asp Val Gly Glu Lys Ala
48
          35
                               40
51 <210> SEQ ID NO: 2
53 <211> LENGTH: 18
55 <212> TYPE: PRT
57 <213> ORGANISM: Candida magnoliae
60 <400> SEQUENCE: 2
62 Ser Asn Ala Leu Val Thr Gly Gly Ser Arg Val Ile Gly Ala Gly Gly
66 Phe Ile
70 <210> SEQ ID NO: 3
72 <211> LENGTH: 756
74 <212> TYPE: DNA
76 <213> ORGANISM: Lactobacillus brevis
79 <220> FEATURE:
81 <221> NAME/KEY: CDS
83 <222> LOCATION: (1)..(756)
86 <400> SEQUENCE: 3
```

Input Set : A:\Substitute Sequence List-13111-00035-US.txt

	_			_	ttg q Leu <i>i</i>	_			Val	Ala		_			Gly		48
89 1					5					10					15		
					tta 🤄												96
	Leu (	3ly	Ile	-	Leu A	Ala	Ile	Ala		Lys	Phe	Val	Glu		Gly	Ala	
93				20					25					30			
					acc 9												144
	Lys V	/al		Ile	Thr (	GLY	Arg		Ser	Asp	Val	Gly		Lys	Ala	Ala	
97			35					40					45				
					act (												192
	Lys		Val	Gly	Thr	Pro		Gln	Ile	Gln	Phe		Gln	His	Asp	Ser	
101		50					55					60					
																gcc	240
		Asp	Glu	ı Asp	GIY		Thr	Lys	Leu	Phe		) Ala	Thr	GIu	Гра	Ala	
105						70					75					80	
																aac	288
	Phe	Gly	Pro	Val		Thr	Leu	Val	Asn		Ala	GLy	Ile	Ala		Asn	
109					85					90					95		
	_	_	_	_	_		_		_	-						gcc	336
	Lys	Ser	Val			Thr	Thr	Thr			Trp	Arg	, гуз			ı Ala	
113				100					105					110			204
																cgg	384
	Val	Asn		_	GIY	Val	Phe			Thr	Arg	, Leu			GIT	Arg	
117			115					120					125				420
	_	_						_					_		-	atc	432
	Met	-		Lys	GIY	Leu	_		Ser	TTE	116			Ser	Ser	: Ile	
121		130					135					140					400
																aaa	480
		GIY	Pne	var	GIY	_		ser	ьeu	. Сту		_	ASI	Ala	ser	Lys	
	145					150					155		. ~~+	+~+	~~	160	528
																cta	526
	GIY	Ala	l val	. Arg		Met	ser	ьуѕ	ser			ı Leo	ı Ası	Cys	175	Leu	
129		~		. ~-+	165	~~~	. ~+ ~			170			~~~	+			576
																aag Lys	370
133	пìя	MSF	, lyl	180		Arg	vai	Poli	185		1112	FIC	, сту	190		Llys	
	202	000	. ++			~~	ata				~~==						624
																caa Gln	024
137	TIIT	PIC	195		Asp	ASL	ь пеи	200		AIG	GIU	GIU	205		. 501	. Gin	
	caa	200			cca	ato	aaa			aat	gaa	cct			att	gcc	672
																Ala	072
141	Arg	210	-	, 1111	FIO	Met	215		110	Gry	GIU	220		. ASE	, 110	niu	
	tac			att	tac	tto			aac	gaa	tct			aca	acc	g ggt	720
																Gly	,20
	225	***	. Cys	, var	- 1 -	230			11011		235					240	
		gaa	+++	gta	gtt			gan	tac	act			ì				756
					Val												
149	JUL			, var	245		O L y	- y	- 1 -	250		. 511.	-				
	<210	)> 9	EO T	D NO													
			-= -		-												

Input Set : A:\Substitute Sequence List-13111-00035-US.txt

Output Set: N:\CRF4\08292006\J573130A.raw

```
154 <211> LENGTH: 252
156 <212> TYPE: PRT
158 <213> ORGANISM: Lactobacillus brevis
161 <400> SEQUENCE: 4
163 Met Ser Asn Arg Leu Asp Gly Lys Val Ala Ile Val Thr Gly Gly Thr
167 Leu Gly Ile Gly Leu Ala Ile Ala Thr Lys Phe Val Glu Gly Ala
                20
171 Lys Val Met Ile Thr Gly Arg His Ser Asp Val Gly Glu Lys Ala Ala
175 Lys Ser Val Gly Thr Pro Asp Gln Ile Gln Phe Phe Gln His Asp Ser
                            55
179 Ser Asp Glu Asp Gly Trp Thr Lys Leu Phe Asp Ala Thr Glu Lys Ala
                        70
183 Phe Gly Pro Val Ser Thr Leu Val Asn Asn Ala Gly Ile Ala Val Asn
                    85
                                        90
187 Lys Ser Val Glu Glu Thr Thr Ala Glu Trp Arg Lys Leu Leu Ala
                100
                                    105
191 Val Asn Leu Asp Gly Val Phe Phe Gly Thr Arg Leu Gly Ile Gln Arg
           115
                                120
195 Met Lys Asn Lys Gly Leu Gly Ala Ser Ile Ile Asn Met Ser Ser Ile
                            135
199 Glu Gly Phe Val Gly Asp Pro Ser Leu Gly Ala Tyr Asn Ala Ser Lys
                        150
203 Gly Ala Val Arg Ile Met Ser Lys Ser Ala Ala Leu Asp Cys Ala Leu
204
                    165
                                        170
207 Lys Asp Tyr Asp Val Arg Val Asn Thr Val His Pro Gly Tyr Ile Lys
                180
                                    185
211 Thr Pro Leu Val Asp Asp Leu Pro Gly Ala Glu Glu Ala Met Ser Gln
                                200
215 Arg Thr Lys Thr Pro Met Gly His Ile Gly Glu Pro Asn Asp Ile Ala
        210
                            215
219 Tyr Ile Cys Val Tyr Leu Ala Ser Asn Glu Ser Lys Phe Ala Thr Gly
                        230
220 225
                                            235
223 Ser Glu Phe Val Val Asp Gly Gly Tyr Thr Ala Gln
                    245
227 <210> SEO ID NO: 5
229 <211> LENGTH: 472
231 <212> TYPE: DNA
233 <213> ORGANISM: Candida magnoliae
236 <220> FEATURE:
238 <221> NAME/KEY: CDS
240 <222> LOCATION: (1)..(471)
243 <400> SEQUENCE: 5
244 aac gcg ctg gtg acg ggc ggc agc cgc ggc att ggc gaa gcc act gcc
245 Asn Ala Leu Val Thr Gly Gly Ser Arg Gly Ile Gly Glu Ala Thr Ala
248 att aag ete gee gag gag gge tae age gte aeg att geg tet ege gge
249 Ile Lys Leu Ala Glu Glu Gly Tyr Ser Val Thr Ile Ala Ser Arg Gly
```

48

96

Input Set : A:\Substitute Sequence List-13111-00035-US.txt

250				20					25					30			
	ctt	aaq	cag		gag	gct	ata	aaσ		aaa	cta	ccc	att		aaα	cag	144
						Ala											
254			35					40					45		-1-	<b></b>	
	gga	caq		cac	cac	gtg	taa		ctt	gat	ctc	agt		atc	gac	act	192
		_	_			Val		_		-		_	_	_	_	_	
258	1	50					55			F		60					
	aca		acc	ttc	aaa	ggg	tca	cca	cta	cct	acc		cac	tac	gac	ata	240
						Gly											
262					4	70					75		_	-	-	80	
264	ctc	qtc	aqc	aat	qct	ggc	qtq	qcc	caq	ttt	aqc	ccq	ttc	atc	qaq	cat	288
						Gly											
266					85	-				90					95		
268	gcg	aag	cag	gac	tgg	tcg	cag	atg	ctt	gcc	atc	aat	ctg	gcg	gca	ccc	336
						Ser											
270		_		100	_				105					110			
272	att	gcg	ctg	gcc	cag	aca	ttt	gct	aag	gcc	att	ggc	gac	aag	ccg	cgc	384
273	Ile	Ala	Leu	Ala	Gln	Thr	Phe	Ala	Lys	Ala	Ile	Gly	Asp	Lys	Pro	Arg	
274			115					120					125				
276	aac	aca	ccg	gcc	cac	att	gtg	ttt	gtc	tcg	tcg	aac	gtc	tcg	ttg	cga	432
277	Asn	Thr	Pro	Ala	His	Ile	Val	Phe	Val	Ser	Ser	Asn	Val	Ser	Leu	Arg	
278		130					135					140					
280	ggc	ttc	ccg	aac	atc	ggc	gtc	aac	tcc	atc	acc	CCC	ggc	a			472
281	Gly	Phe	Pro	Asn	Ile	Gly	Val	Asn	Ser	Ile	Thr	Pro	Gly				
202	145					1 5 0					1						
						150					155						
285	<210			ON C		150					155						
285 287	<210 <210	l> L	ENGT	i: 15		150					133						
285 287 289	<210 <213 <213	l> LI 2> T	ENGTI PE:	4: 15 PRT	57						122						
285 287 289 291	<210 <210 <210 <210	1> LF 2> T 3> OF	ENGTI (PE: RGAN)	H: 19 PRT ISM:	57 Can	lso	magı	nolia	ae		122						
285 287 289 291 294	<210 <211 <212 <213 <400	1> LE 2> T 3> OE 0> SE	ENGTI (PE : RGAN I EQUEI	H: 15 PRT ISM: NCE:	57 Cand	dida	_			a.		a.	a.	77.	m).	•	
285 287 289 291 294 296	<210 <212 <212 <213 <400 Asn	1> LE 2> T 3> OE 0> SE	ENGTI (PE : RGAN I EQUEI	H: 15 PRT ISM: NCE:	Cano 6 Thr		_			_		Gly	Glu	Ala		Ala	
285 287 289 291 294 296 297	<210 <211 <212 <213 <400 Asn	1> LH 2> TY 3> OH 0> SH Ala	ENGTI (PE: RGANI EQUEI Leu	H: 15 PRT ISM: NCE: Val	Cano 6 Thr 5	dida Gly	Gly	Ser	Arg	10	Ile	_			15		
285 287 289 291 294 296 297 300	<210 <211 <212 <213 <400 Asn	1> LH 2> TY 3> OH 0> SH Ala	ENGTI (PE: RGANI EQUEI Leu	H: 15 PRT ISM: NCE: Val	Cano 6 Thr 5	dida	Gly	Ser	Arg Ser	10	Ile	_		Ser	15		
285 287 289 291 294 296 297 300 301	<210 <211 <211 <213 <400 Asn 1 Ile	l> LI 2> TY 3> OF 0> SI Ala Lys	ENGTI (PE: RGANI EQUEI Leu Leu	H: 19 PRT ISM: NCE: Val Ala 20	Cano 6 Thr 5 Glu	dida Gly Glu	Gly Gly	Ser Tyr	Arg Ser 25	10 Val	Ile Thr	Ile	Ala	Ser 30	15 Arg	Gly	
285 287 289 291 294 296 297 300 301 304	<210 <211 <211 <213 <400 Asn 1 Ile	l> LI 2> TY 3> OF 0> SI Ala Lys	ENGTH (PE: RGANI EQUEN Leu Leu	H: 19 PRT ISM: NCE: Val Ala 20	Cano 6 Thr 5 Glu	dida Gly	Gly Gly	Ser Tyr Lys	Arg Ser 25	10 Val	Ile Thr	Ile	Ala Ile	Ser 30	15 Arg	Gly	
285 287 289 291 294 296 297 300 301 304 305	<210 <211 <212 <400 Asn 1 Ile	1> LH 2> TY 3> OH 0> SH Ala Lys	ENGTH (PE: RGANI EQUEN Leu Leu Gln 35	H: 19 PRT ISM: VCE: Val Ala 20 Leu	Cano 6 Thr 5 Glu	dida Gly Glu Ala	Gly Gly Val	Ser Tyr Lys 40	Arg Ser 25 Ala	10 Val Lys	Ile Thr Leu	Ile Pro	Ala Ile 45	Ser 30 Val	15 Arg Lys	Gly Gln	
285 287 289 291 294 296 297 300 301 304 305 308	<210 <211 <212 <400 Asn 1 Ile	1> Li 2> Ti 3> OF 0> SF Ala Lys Lys	ENGTH (PE: RGANI EQUEN Leu Leu Gln 35	H: 19 PRT ISM: VCE: Val Ala 20 Leu	Cano 6 Thr 5 Glu	dida Gly Glu	Gly Gly Val Trp	Ser Tyr Lys 40	Arg Ser 25 Ala	10 Val Lys	Ile Thr Leu	Ile Pro Ser	Ala Ile 45	Ser 30 Val	15 Arg Lys	Gly Gln	
285 287 289 291 294 296 297 300 301 304 305 308 309	<210 <211 <211 <213 <400 Asn 1 Ile Leu	1 > LH 2 > TY 3 > OF 0 > SF Ala Lys Lys Gln 50	ENGTH YPE: RGANI EQUEN Leu Leu Gln 35 Val	PRT ISM: ISM: VCE: Val Ala 20 Leu His	Cand 6 Thr 5 Glu Glu	dida Gly Glu Ala Val	Gly Gly Val Trp 55	Ser Tyr Lys 40 Gln	Arg Ser 25 Ala Leu	10 Val Lys Asp	Ile Thr Leu Leu	Ile Pro Ser 60	Ala Ile 45 Asp	Ser 30 Val Val	15 Arg Lys Asp	Gly Gln Ala	
285 287 289 291 294 296 297 300 301 305 308 309 312	<210 <211 <212 <213 <400 Asn 1 Ile Leu Gly	1 > LH 2 > TY 3 > OF 0 > SF Ala Lys Lys Gln 50	ENGTH YPE: RGANI EQUEN Leu Leu Gln 35 Val	PRT ISM: ISM: VCE: Val Ala 20 Leu His	Cand 6 Thr 5 Glu Glu His Lys	dida Gly Glu Ala Val	Gly Gly Val Trp 55 Ser	Ser Tyr Lys 40 Gln	Arg Ser 25 Ala Leu	10 Val Lys Asp Pro	Ile Thr Leu Leu Ala	Ile Pro Ser 60 Ser	Ala Ile 45 Asp	Ser 30 Val Val	15 Arg Lys Asp	Gly Gln Ala	
285 287 289 291 294 296 297 300 301 304 305 308 309 312 313	<210 <211 <211 <400 Asn 1 Ile Leu Gly Ala 65	1 > LH 2 > TY 3 > OH 0 > SH Ala Lys Lys Gln 50 Ala	ENGTH YPE: RGANI EQUEN Leu Leu Gln 35 Val	H: 19 PRT ISM: VE: Val Ala 20 Leu His	Cand 6 Thr 5 Glu Glu His	dida Gly Glu Ala Val Gly 70	Gly Gly Val Trp 55 Ser	Ser Tyr Lys 40 Gln Pro	Arg Ser 25 Ala Leu Leu	10 Val Lys Asp	Ile Thr Leu Leu Ala 75	Ile Pro Ser 60 Ser	Ala Ile 45 Asp	Ser 30 Val Val	15 Arg Lys Asp	Gly Gln Ala Val 80	
285 287 289 291 294 296 297 300 301 304 305 308 309 312 313 316	<210 <211 <211 <400 Asn 1 Ile Leu Gly Ala 65	1 > LH 2 > TY 3 > OH 0 > SH Ala Lys Lys Gln 50 Ala	ENGTH YPE: RGANI EQUEN Leu Leu Gln 35 Val	H: 19 PRT ISM: VE: Val Ala 20 Leu His	Cand 6 Thr 5 Glu Glu His Lys	dida Gly Glu Ala Val	Gly Gly Val Trp 55 Ser	Ser Tyr Lys 40 Gln Pro	Arg Ser 25 Ala Leu Leu	10 Val Lys Asp Pro	Ile Thr Leu Leu Ala 75	Ile Pro Ser 60 Ser	Ala Ile 45 Asp	Ser 30 Val Val	15 Arg Lys Asp Asp	Gly Gln Ala Val 80	
285 287 289 291 294 296 297 300 301 304 305 308 312 313 316 317	<210 <211 <211 <400 Asn 1 Ile Leu Gly Ala 65 Leu	1 > LH 2 > TY 3 > OH 0 > SH Ala Lys Lys Gln 50 Ala	ENGTH YPE: RGANI EQUEN Leu Leu Gln 35 Val Ala Ser	PRT ISM: ISM: Val Ala 20 Leu His Phe Asn	Cand 6 Thr 5 Glu Glu His Lys Ala 85	dida Gly Glu Ala Val Gly 70 Gly	Gly Gly Val Trp 55 Ser Val	Ser Tyr Lys 40 Gln Pro	Arg Ser 25 Ala Leu Leu Gln	10 Val Lys Asp Pro Phe 90	Ile Thr Leu Leu Ala 75 Ser	Ile Pro Ser 60 Ser	Ala Ile 45 Asp Arg	Ser 30 Val Val Tyr	15 Arg Lys Asp Asp Glu 95	Gly Gln Ala Val 80 His	
285 287 289 291 294 296 297 300 301 304 305 308 312 313 316 317 320	<210 <211 <211 <400 Asn 1 Ile Leu Gly Ala 65 Leu	1 > LH 2 > TY 3 > OH 0 > SH Ala Lys Lys Gln 50 Ala	ENGTH YPE: RGANI EQUEN Leu Leu Gln 35 Val Ala Ser	PRT ISM: ISM: Val Ala 20 Leu His Phe Asn Asp	Cand 6 Thr 5 Glu Glu His Lys Ala 85	dida Gly Glu Ala Val Gly 70	Gly Gly Val Trp 55 Ser Val	Ser Tyr Lys 40 Gln Pro	Arg Ser 25 Ala Leu Leu Gln Leu	10 Val Lys Asp Pro Phe 90	Ile Thr Leu Leu Ala 75 Ser	Ile Pro Ser 60 Ser	Ala Ile 45 Asp Arg	Ser 30 Val Val Tyr Ile	15 Arg Lys Asp Asp Glu 95	Gly Gln Ala Val 80 His	
285 287 289 291 294 296 297 300 301 304 305 308 312 313 316 317 320 321	<210 <211 <211 <400 Asn 1 Ile Leu Gly Ala 65 Leu Ala	1 > LH 2 > TY 3 > OH 3 > OH Ala Lys Lys Gln 50 Ala Val Lys	ENGTH YPE: RGANI EQUEN Leu Leu Gln 35 Val Ala Ser Gln	PRT ISM: ISM: Val Ala 20 Leu His Phe Asn Asp 100	Cand 6 Thr 5 Glu His Lys Ala 85 Trp	dida Gly Glu Ala Val Gly 70 Gly Ser	Gly Gly Val Trp 55 Ser Val Gln	Ser Tyr Lys 40 Gln Pro Ala Met	Arg Ser 25 Ala Leu Leu Gln Leu 105	10 Val Lys Asp Pro Phe 90 Ala	Ile Thr Leu Leu Ala 75 Ser Ile	Ile Pro Ser 60 Ser Pro Asn	Ala Ile 45 Asp Arg Phe	Ser 30 Val Val Tyr Ile Ala 110	15 Arg Lys Asp Asp Glu 95 Ala	Gly Gln Ala Val 80 His	
285 287 289 291 294 296 297 300 301 304 305 308 312 313 316 317 320 321	<210 <211 <211 <400 Asn 1 Ile Leu Gly Ala 65 Leu Ala	1 > LH 2 > TY 3 > OH 3 > OH Ala Lys Lys Gln 50 Ala Val Lys	ENGTH YPE: RGANI EQUEN Leu Leu Gln 35 Val Ala Ser Gln	PRT ISM: ISM: Val Ala 20 Leu His Phe Asn Asp 100	Cand 6 Thr 5 Glu His Lys Ala 85 Trp	dida Gly Glu Ala Val Gly 70 Gly	Gly Gly Val Trp 55 Ser Val Gln	Ser Tyr Lys 40 Gln Pro Ala Met	Arg Ser 25 Ala Leu Leu Gln Leu 105	10 Val Lys Asp Pro Phe 90 Ala	Ile Thr Leu Leu Ala 75 Ser Ile	Ile Pro Ser 60 Ser Pro Asn	Ala Ile 45 Asp Arg Phe	Ser 30 Val Val Tyr Ile Ala 110	15 Arg Lys Asp Asp Glu 95 Ala	Gly Gln Ala Val 80 His	
285 287 289 291 294 296 297 300 301 304 305 313 316 317 320 321 324 325	<210 <211 <211 <400 Asn 1 Ile Leu Gly Ala 65 Leu Ala Ile	1 > Li 2 > TY 3 > OF 3 > OF 0 > SF Ala Lys Lys Gln 50 Ala Val Lys	ENGTH YPE: RGAN: EQUEN Leu Leu Gln 35 Val Ala Ser Gln Leu 115	PRT ISM: ISM: Val Ala 20 Leu His Phe Asn Asp 100 Ala	Cand 6 Thr 5 Glu His Lys Ala 85 Trp	dida Gly Glu Ala Val Gly 70 Gly Ser Thr	Gly Gly Val Trp 55 Ser Val Gln Phe	Ser Tyr Lys 40 Gln Pro Ala Met Ala 120	Arg Ser 25 Ala Leu Leu Gln Leu 105 Lys	10 Val Lys Asp Pro Phe 90 Ala	Ile Thr Leu Leu Ala 75 Ser Ile	Ile Pro Ser 60 Ser Pro Asn Gly	Ala Ile 45 Asp Arg Phe Leu Asp 125	Ser 30 Val Val Tyr Ile Ala 110 Lys	15 Arg Lys Asp Asp Glu 95 Ala Pro	Gly Gln Ala Val 80 His Pro Arg	
285 287 289 291 294 296 297 300 301 304 305 313 316 317 320 321 324 325	<210 <211 <211 <400 Asn 1 Ile Leu Gly Ala 65 Leu Ala Ile	1 > Li 2 > TY 3 > OF 3 > OF 0 > SF Ala Lys Lys Gln 50 Ala Val Lys	ENGTH YPE: RGAN: EQUEN Leu Leu Gln 35 Val Ala Ser Gln Leu 115	PRT ISM: ISM: Val Ala 20 Leu His Phe Asn Asp 100 Ala	Cand 6 Thr 5 Glu His Lys Ala 85 Trp	dida Gly Glu Ala Val Gly 70 Gly Ser	Gly Gly Val Trp 55 Ser Val Gln Phe	Ser Tyr Lys 40 Gln Pro Ala Met Ala 120	Arg Ser 25 Ala Leu Leu Gln Leu 105 Lys	10 Val Lys Asp Pro Phe 90 Ala	Ile Thr Leu Leu Ala 75 Ser Ile	Ile Pro Ser 60 Ser Pro Asn Gly	Ala Ile 45 Asp Arg Phe Leu Asp 125	Ser 30 Val Val Tyr Ile Ala 110 Lys	15 Arg Lys Asp Asp Glu 95 Ala Pro	Gly Gln Ala Val 80 His Pro Arg	
285 287 289 291 294 296 297 300 301 304 305 312 313 316 317 320 321 324 325 328	<210 <211 <211 <400 Asn 1 Ile Leu Gly Ala 65 Leu Ala Ile Asn	1 > LH 2 > TY 3 > OH 3 > OH CONTROL Lys Lys Gln 50 Ala Val Lys Ala Thr 130	ENGTH YPE: RGAN: RGAN: EQUENT Leu Gln 35 Val Ala Ser Gln Leu 115 Pro	PRT ISM: ISM: ISM: Val Ala 20 Leu His Phe Asn Asp 100 Ala Ala	Cand 6 Thr 5 Glu Glu His Lys Ala 85 Trp Gln His	dida Gly Glu Ala Val Gly 70 Gly Ser Thr	Gly Gly Val Trp 55 Ser Val Gln Phe Val 135	Ser Tyr Lys 40 Gln Pro Ala Met Ala 120 Phe	Arg Ser 25 Ala Leu Leu Gln Leu 105 Lys Val	10 Val Lys Asp Pro Phe 90 Ala Ala Ser	Ile Thr Leu Leu Ala 75 Ser Ile Ile Ser	Ile Pro Ser 60 Ser Pro Asn Gly Asn 140	Ala Ile 45 Asp Arg Phe Leu Asp 125 Val	Ser 30 Val Val Tyr Ile Ala 110 Lys	15 Arg Lys Asp Asp Glu 95 Ala Pro	Gly Gln Ala Val 80 His Pro Arg	

Input Set : A:\Substitute Sequence List-13111-00035-US.txt

333	145 150 155	
	<210> SEQ ID NO: 7	
	<211> LENGTH: 27	
	<212> TYPE: DNA	
	<213> ORGANISM: Artificial sequence	
	<220> FEATURE:	
343	<223> OTHER INFORMATION: Primer: Mke 338	
345	<400> SEQUENCE: 7	
346	gggaattcca tatgtctaac cgtttgg	27
	<210> SEQ ID NO: 8	
350	<211> LENGTH: 28	
351	<212> TYPE: DNA	
352	<213> ORGANISM: Artificial sequence	
354	<220> FEATURE:	
355	<223> OTHER INFORMATION: Primer: Mke 339	
357	<400> SEQUENCE: 8	
	cgtagggaag cttattgagc agtgtagc	28
361	<210> SEQ ID NO: 9	
	<211> LENGTH: 28	
	<212> TYPE: DNA	
	<213> ORGANISM: Artificial sequence	
	<220> FEATURE:	
	<223> OTHER INFORMATION: Primer: Mke 366	
	<400> SEQUENCE: 9	20
	acgacgacga gcaacgebet bgtbacgg	28
	<210> SEQ ID NO: 10 <211> LENGTH: 28	
	<211> LENGTH: 26 <212> TYPE: DNA	
	<213> ORGANISM: Artificial sequence	
	<220> FEATURE:	
	<223> OTHER INFORMATION: Primer: Mke 367	
	<400> SEQUENCE: 10	
	acgacgacgt cgaacgcbct bgtbacgg	28
	<210> SEQ ID NO: 11	-
	<211> LENGTH: 27	
387	<212> TYPE: DNA	
388	<213> ORGANISM: Artificial sequence	
	<220> FEATURE:	
391	<223> OTHER INFORMATION: Primer: Mke 374	
393	<400> SEQUENCE: 11	
394	gccggggttg atsswgttsa cgccgat	27
397	<210> SEQ ID NO: 12	
398	<211> LENGTH: 10	
399	<212> TYPE: PRT	
	<213> ORGANISM: Lactobacillus brevis	
	<220> FEATURE:	
	<221> NAME/KEY: MISC_FEATURE	
	<222> LOCATION: (1)(10)	
406	<223> OTHER INFORMATION: Fragment: C terminus	

FYI

Input Set : A:\Substitute Sequence List-13111-00035-US.txt

Output Set: N:\CRF4\08292006\J573130A.raw

#### Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

```
Seq#:15; Xaa Pos. 60
Seq#:16; Xaa Pos. 19,20
Seq#:17; Xaa Pos. 12,13,14,15
Seq#:18; Xaa Pos. 8
Seq#:19; Xaa Pos. 9,11,12,13,14,15
Seq#:22; Xaa Pos. 6,10,11,12,13,14,15
Seq#:23; Xaa Pos. 6,12,15,16,17,18
Seq#:24; Xaa Pos. 6,10,11,12,13,14,15,16,17
Seq#:25; Xaa Pos. 16,17,18,19,20
Seq#:26; Xaa Pos. 1,3
Seq#:27; Xaa Pos. 9,13
Seq#:28; Xaa Pos. 7,17,18,19,20
Seq#:30; Xaa Pos. 1,10,11,12,13,14,15,16,17,18,19,20
Seq#:32; Xaa Pos. 29,30
Seq#:33; Xaa Pos. 5,6,7,8,9,10
Seq#:34; Xaa Pos. 3,13,14,15,16,17,18,19,20
Seq#:35; Xaa Pos. 11,12,13,14
Seq#:36; Xaa Pos. 1
Seq#:40; Xaa Pos. 1
Seq#:41; Xaa Pos. 2,39,40
Seq#:42; Xaa Pos. 37,38,39
Seq#:43; Xaa Pos. 12,13,14,15
Seq#:44; Xaa Pos. 13,14,15
```

### VERIFICATION SUMMARY

PATENT APPLICATION: US/10/573,130A

Input Set : A:\Substitute Sequence List-13111-00035-US.txt

DATE: 08/29/2006

TIME: 08:46:40

Output Set: N:\CRF4\08292006\J573130A.raw

L:496 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:48 L:596 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16 after pos.:16 L:617 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:0 L:634 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 after pos.:0 L:705 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19 after pos.:0 L:800 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22 after pos.:0 L:897 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23 after pos.:0 M:341 Repeated in SeqNo=23 L:923 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24 after pos.:0 M:341 Repeated in SeqNo=24 L:944 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25 after pos.:0 M:341 Repeated in SeqNo=25 L:970 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26 after pos.:0 L:1057 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27 after pos.:0 L:1154 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28 after pos.:0 M:341 Repeated in SeqNo=28 L:1320 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 after pos.:0 M:341 Repeated in SeqNo=30 L:1554 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:32 after pos.:16 L:1571 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:33 after pos.:0 L:1632 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:34 after pos.:0 M:341 Repeated in SeqNo=34 L:1653 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:35 after pos.:0 L:1685 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:36 after pos.:0  $L\!:\!1815$  M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:40 after pos.:0 L:1845 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:41 after pos.:0 M:341 Repeated in SeqNo=41 L:1987 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:42 after pos.:32 L:2004 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:43 after pos.:0 L:2066 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:44 after pos.:0

<210><211><211><212><213>	• 60 • PF	) RT	baci	.llus	s bre	evis														
<220><221><222><223>	• V <i>I</i>		. (47		s Ala	a or	Lys	Â	la	at	Lu	rat	ion	49	o Ca	no	nly	بعر زر	Asel (ac)	en! ]:
<220><221><222><223>	. ITA	NSUR 18). mino	RE .(48 ) aci	B) .d is	s Lys	s or	Ala	si	ani	er	w						Us	el ) ste	lac	2,
<220><221><222><222>	,	. D. T. A	\1m				Thr	s	an	e l	w	J				<u> </u>	225 i	1-6.	223 eet	
<220><221><222><222><223>	• VA	ARIA	NT .(59	<del>)</del> )	s Phe						s		l el	un	,			70		
<220><221><222><222><223>	• mi	50).	feat .(60	))	yn (*)	K														
<400>	. 15	5																		
Ser A	sn A	Arg	Leu	Asp 5	Gly	Lys	Val	Ala	Ile 10	Val	Thr	Gly	Gly	Thr 15	Leu					
Gly I	le (	Gly	Leu 20	Ala	Ile	Ala	Thr	Lys 25	Phe	Val	Glu	Glu	Gly 30	Ala	Lys					
Val M		[le 35	Thr	Gly	Arg	His	Ser 40	Asp	Val	Gly	Glu	Lys 45	Ala	Ala	Lys	)				
Ser W	/al ( 50	Gly	Th.	Pro	asp	Gln 55	Ile	Gln	Phe	Phe	Xaa 60									
			_												0	1		11	/ 1-	1

These types I ever appear in Sequence 16 and other subsequent subsequent

. .